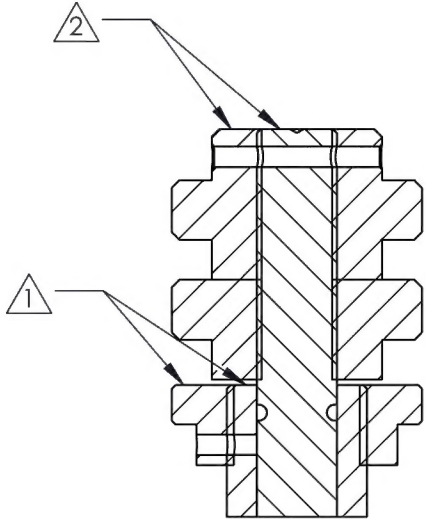
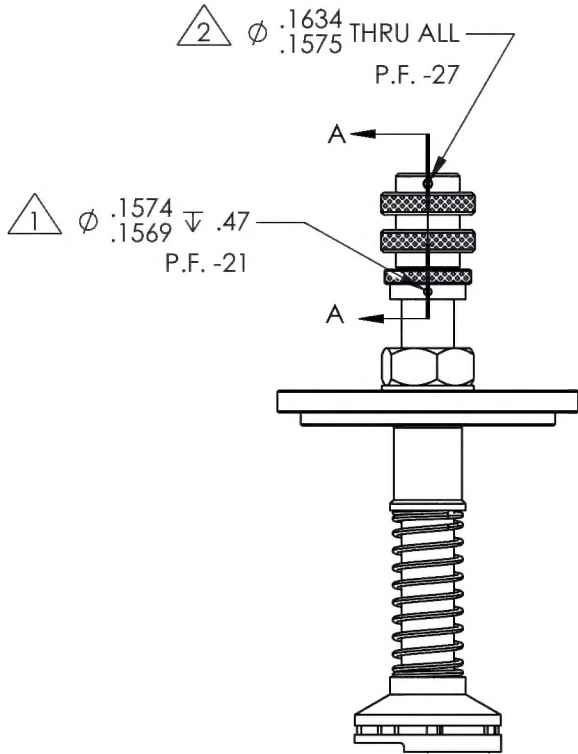


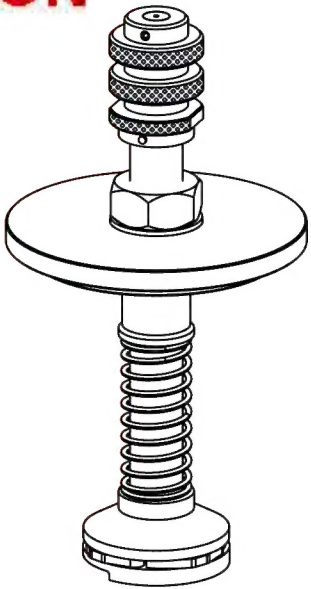
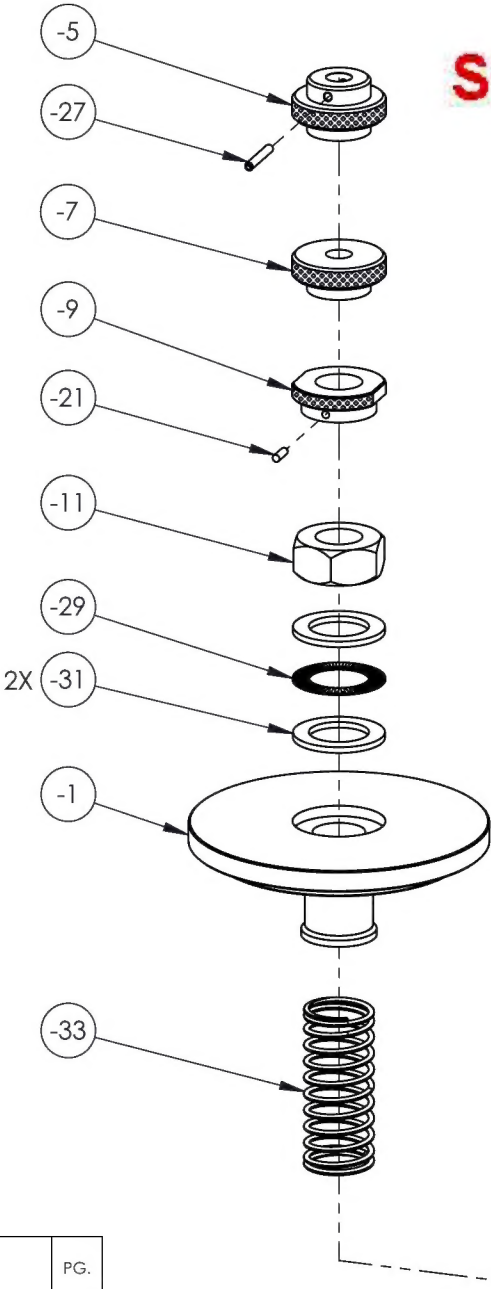
This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		RELEASED FOR PRODUCTION.	2/8/2016	DPD	JAG

SEE ATTACHED DEVIATION




SECTION A-A
SCALE 1 : 1.5



ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-1	1	PLATE	6061		2
			-3	1	COVER ROD	4140/4142		3
			-5	1	TALL THUMB NUT	6061		4
			-7	1	SHORT THUMB NUT	6061		5
			-9	1	THUMB NUT WITH FLATS	4140/4142		6
			-11	1	SPECIAL HEX NUT	4140/4142		7
	X		-13	1	BASE ROD ASSEMBLY			8
	1		-15		BASE ROD	4140/4142		9
X			-17	4	SWING OUT ARM ASSEMBLY			10
1			-19		SWING OUT ARM	4140/4142		11
	3	B/O	-21	1	DOWEL PIN	STEEL	M4 X 14mm (MCMASTER-CARR #91595A158)	1, 8
	1	B/O	-23		DOWEL PIN	STEEL	M4 X 8mm (MCMASTER-CARR #91595A150)	8
1		B/O	-25		DOWEL PIN	STEEL	M4 X 10mm (MCMASTER-CARR #91595A152)	10
		B/O	-27	1	SPRING PIN	STEEL	M4 X 32mm (MCMASTER-CARR #91611A215)	1
		B/O	-29	1	THRUST BEARING	STEEL	Ø1-1/4 I.D. X Ø1-15/16 O.D. X 5/64 (MCMASTER-CARR #5909K38)	1
		B/O	-31	2	THRUST WASHER	STEEL	Ø1-1/4 I.D. X Ø1-15/16 O.D. X .126 (MCMASTER-CARR #5909K65)	1
		B/O	-33	1	COMPRESSION SPRING	S.S.	Ø.114 WIRE X Ø1.468 O.D. X 5.13 (CENTURY SPRING #S-970)	1
ASSY -17	ASSY -13							

NOTES:

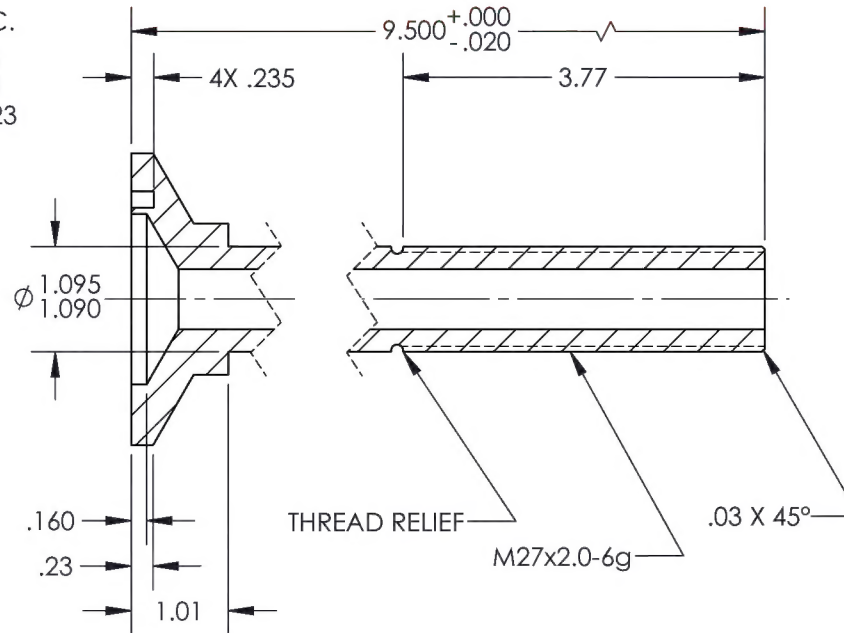
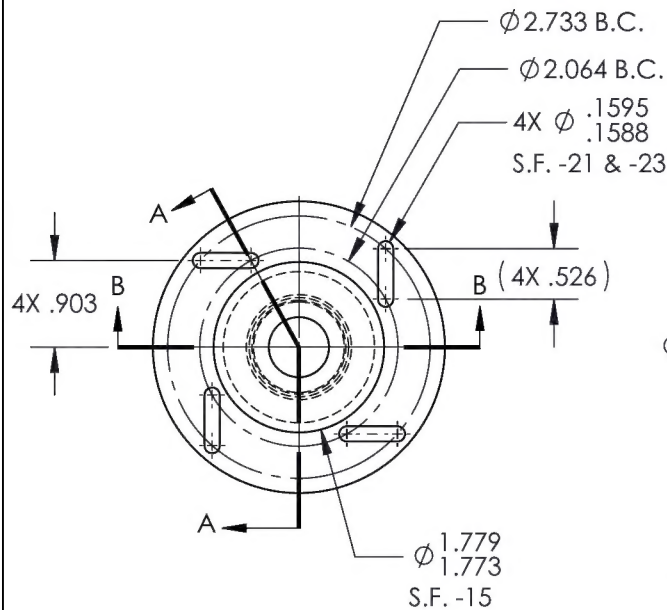
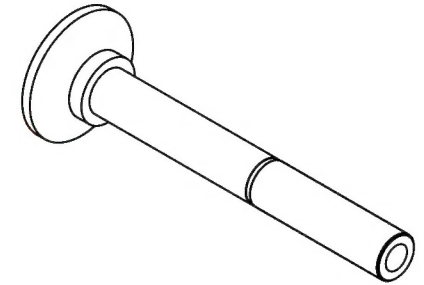
1. THREAD -9 FLUSH WITH -3 PRIOR TO DRILLING.
2. THREAD -5 FLUSH WITH -13 PRIOR TO DRILLING.
3. REF. EUROCOPTER T/N: 105-14101W1.

			
TITLE PULLER			
DWG NO. RBE105-14101W1			REV 1
MAT'L		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓	
HEAT TREAT			
FINISH			
SPEC			
DRAWN BY:	DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
CHECKED:	MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
OPPS APPR:	ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
QA APPR:	LINDSAY	USED ON MODEL	
APPROVED:	GILBERT	EC145	
SCALE	1:4	DATE	12/30/2015
			SHEET 1 OF 11

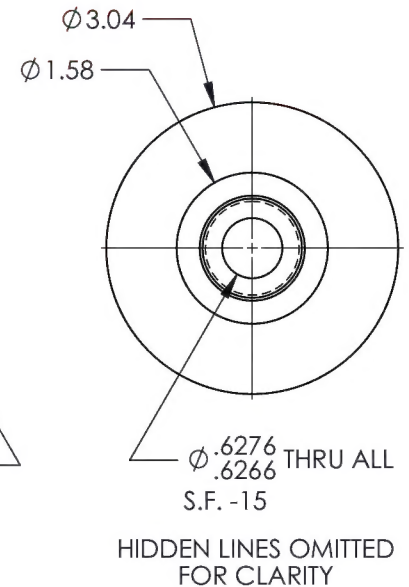
This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS							
REV	ECR	DESCRIPTION			DATE	INITIAL	APPROVED

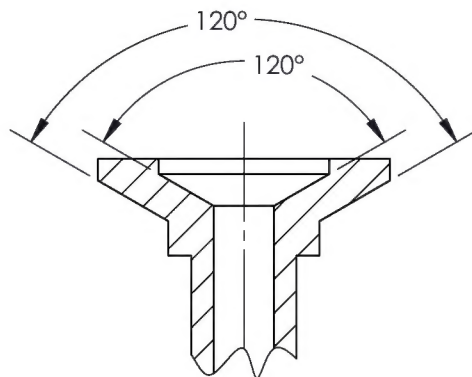
SEE ATTACHED DEVIATION



SECTION A-A



HIDDEN LINES OMITTED FOR CLARITY



SECTION B-B

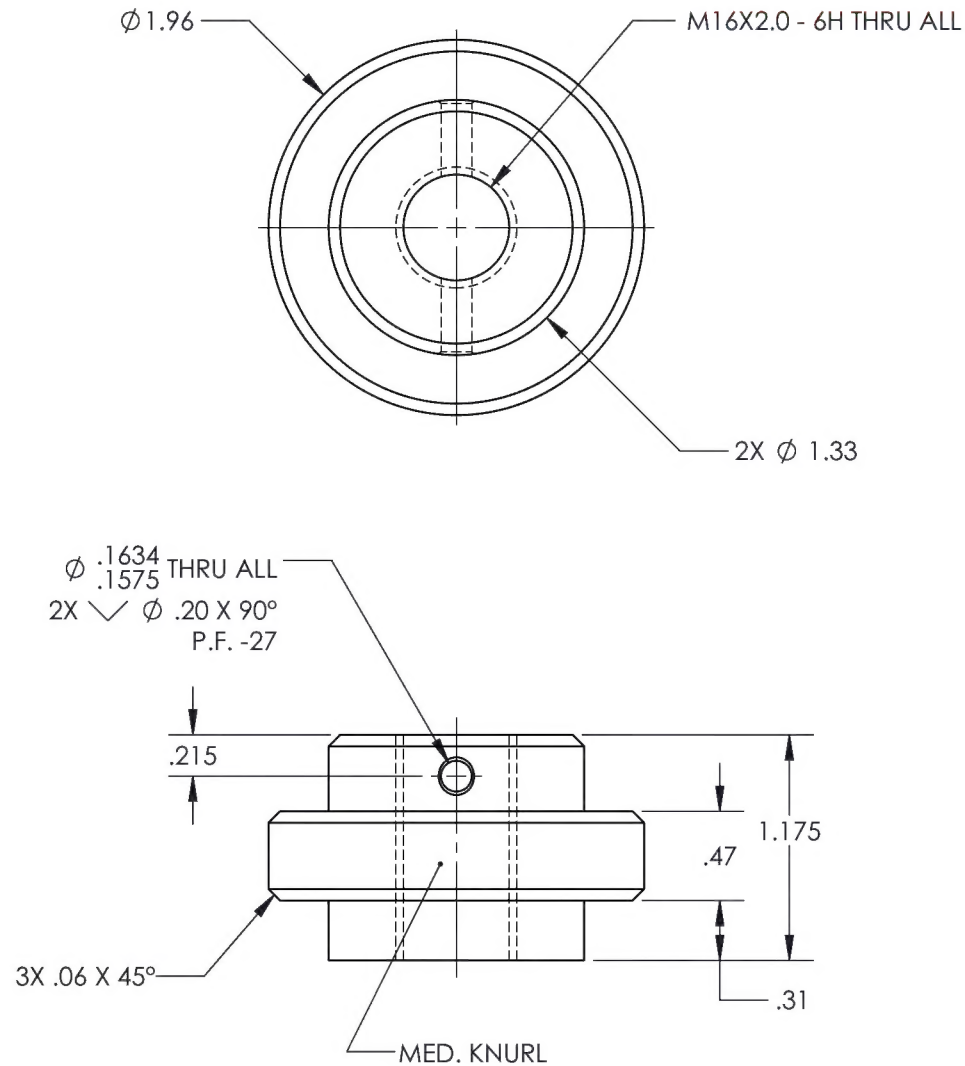
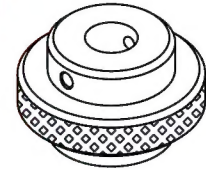
COVER ROD

DART AEROSPACE	
TITLE EXTRACTOR	
DWG NO. RBE105-14101W1-3	REV 1
MAT'L 4140/4142 HEAT TREAT RC 35-40 FINISH ZINC PLATE SPEC ASTM B633 TYPE I SC 2	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: DUERFELDT CHECKED: MACKOVJAK OPPTS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT	
USED ON MODEL EC145	
SCALE 1:2	DATE 12/30/2015
SHEET 3 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED

SEE ATTACHED DEVIATION



(-5)

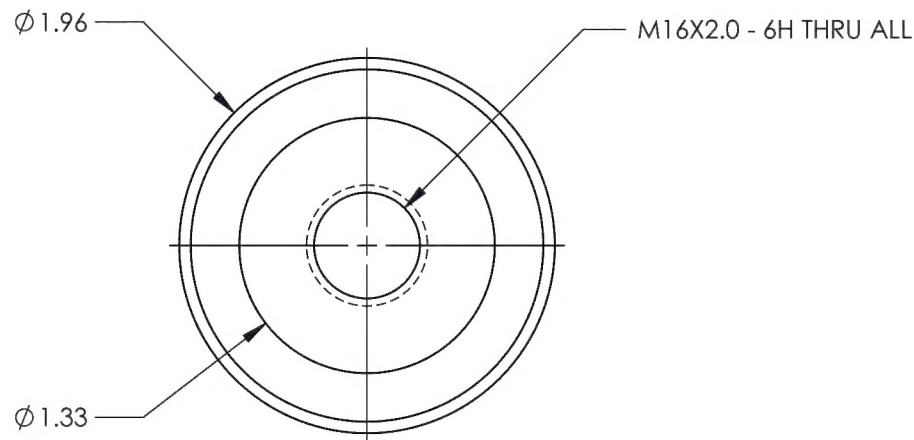
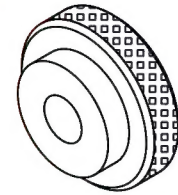
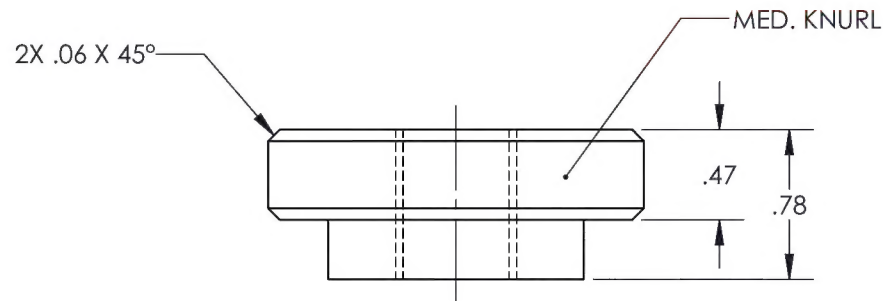
TALL THUMB NUT

DART AEROSPACE	
TITLE EXTRACTOR	
DWG NO. RBE105-14101W1-5	REV 1
MAT'L 6061 HEAT TREAT FINISH CLEAR ANODIZE SPEC MIL-A-8625, TYPE II, CLASS I DRAWN BY: DUERFELDT CHECKED: MACKOVJAK OPPTS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX \pm .005 FRACTIONS \pm 1/8 .XX \pm .01 ANGLES \pm 5° .X \pm .1 SURFACES = 125° 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
USED ON MODEL EC145	
SCALE 1:1	DATE 12/30/2015
SHEET 4 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS							
REV	ECR	DESCRIPTION			DATE	INITIAL	APPROVED

SEE ATTACHED DEVIATION



(-7)

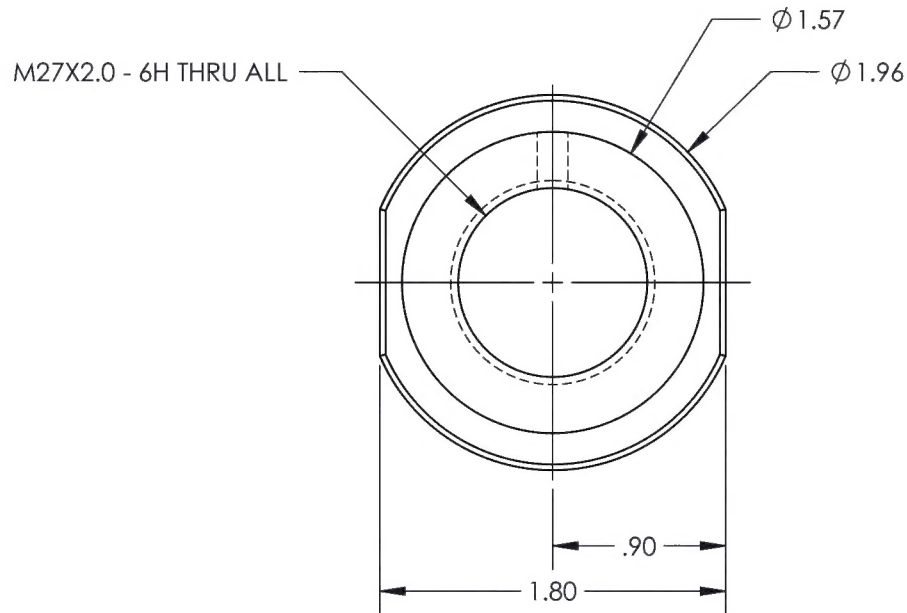
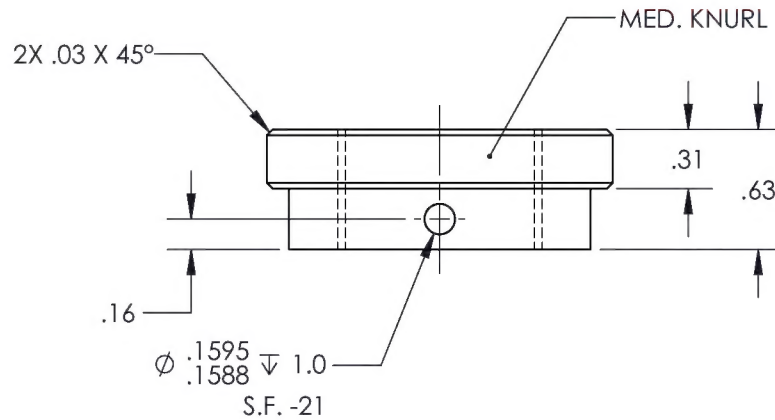
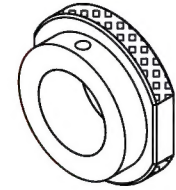
SHORT THUMB NUT

DART AEROSPACE	
TITLE PULLER	
DWG NO. RBE105-14101W1-7	REV 1
MAT'L 6061	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH CLEAR ANODIZE	.XXX ± .005 FRACTIONS ± 1/8
SPEC MIL-A-8625, TYPE II, CLASS I	.XX ± .01 ANGLES ± .5°
DRAWN BY: DUERFELDT	.X ± .1 SURFACES = 125
CHECKED: MACKOVJAK	1. BREAK ALL SHARP EDGES
OPPS APPR: ANDERSON	.015 x 45° OR .015R
QA APPR: LINDSAY	2. DIMENSIONAL LIMITS APPLY
APPROVED: GILBERT	AFTER PLATING
SCALE 1:1	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
DATE 12/30/2015	USED ON MODEL
SHEET 5 OF 11	EC145

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED

SEE ATTACHED DEVIATION



(-9)

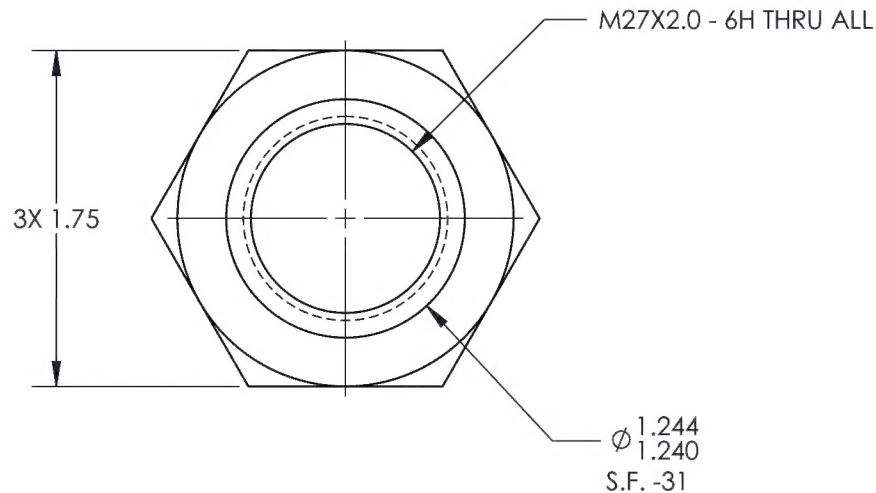
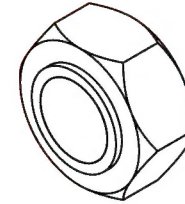
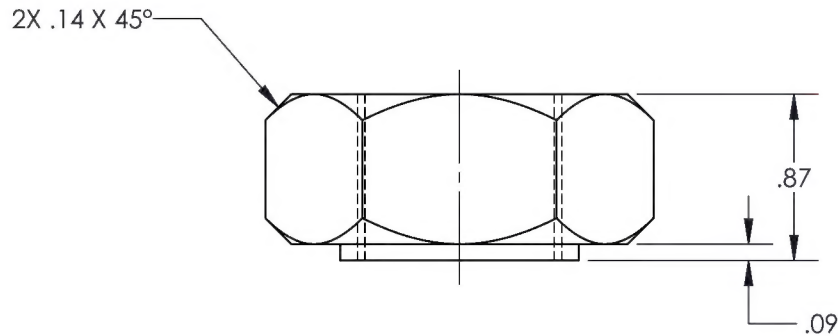
THUMB NUT WITH FLATS

DART AEROSPACE	
TITLE PULLER	
DWG NO. RBE105-14101W1-9	REV 1
MAT'L 4140/4142 HEAT RC 35-40 TREAT FINISH ZINC PLATE SPEC ASTM B633 TYPE I SC 2	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125°
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	EC145
SCALE 1:1	DATE 12/30/2015
SHEET 6 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS						
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED	

SEE ATTACHED DEVIATION



(-11)

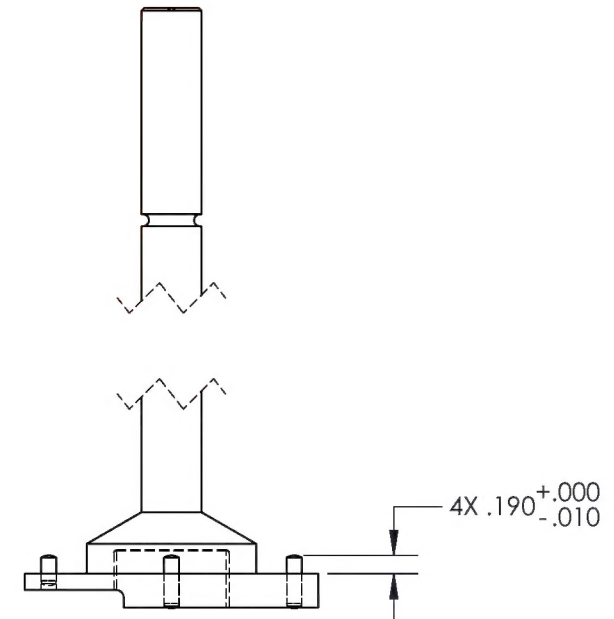
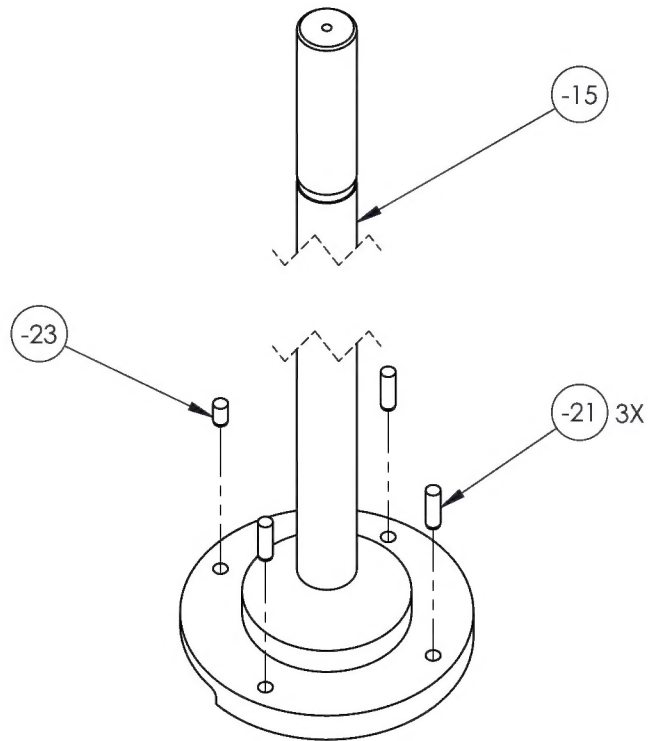
SPECIAL HEX NUT

DART AEROSPACE																				
TITLE PULLER																				
DWG NO. RBE105-14101W1-11	REV 1																			
<table border="0"> <tr> <td>MAT'L 4140/4142</td> <td rowspan="4"> UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125° ✓ </td> </tr> <tr> <td>HEAT TREAT RC 35-40</td> </tr> <tr> <td>FINISH ZINC PLATE</td> </tr> <tr> <td>SPEC ASTM B633 TYPE I SC 2</td> </tr> <tr> <td>DRAWN BY: DUERFELDT</td> <td>1. BREAK ALL SHARP EDGES .015 x 45° OR .015R</td> </tr> <tr> <td>CHECKED: MACKOVJAK</td> <td>2. DIMENSIONAL LIMITS APPLY AFTER PLATING</td> </tr> <tr> <td>OPPS APPR: ANDERSON</td> <td>3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009</td> </tr> <tr> <td>QA APPR: LINDSAY</td> <td>USED ON MODEL</td> </tr> <tr> <td>APPROVED: GILBERT</td> <td>EC145</td> </tr> <tr> <td>SCALE 1:1</td> <td>DATE 12/30/2015</td> </tr> <tr> <td colspan="2" style="text-align: right;">SHEET 7 OF 11</td> </tr> </table>		MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125° ✓	HEAT TREAT RC 35-40	FINISH ZINC PLATE	SPEC ASTM B633 TYPE I SC 2	DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING	OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	QA APPR: LINDSAY	USED ON MODEL	APPROVED: GILBERT	EC145	SCALE 1:1	DATE 12/30/2015	SHEET 7 OF 11	
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125° ✓																			
HEAT TREAT RC 35-40																				
FINISH ZINC PLATE																				
SPEC ASTM B633 TYPE I SC 2																				
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R																			
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING																			
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009																			
QA APPR: LINDSAY	USED ON MODEL																			
APPROVED: GILBERT	EC145																			
SCALE 1:1	DATE 12/30/2015																			
SHEET 7 OF 11																				

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS						
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED	

SEE ATTACHED DEVIATION



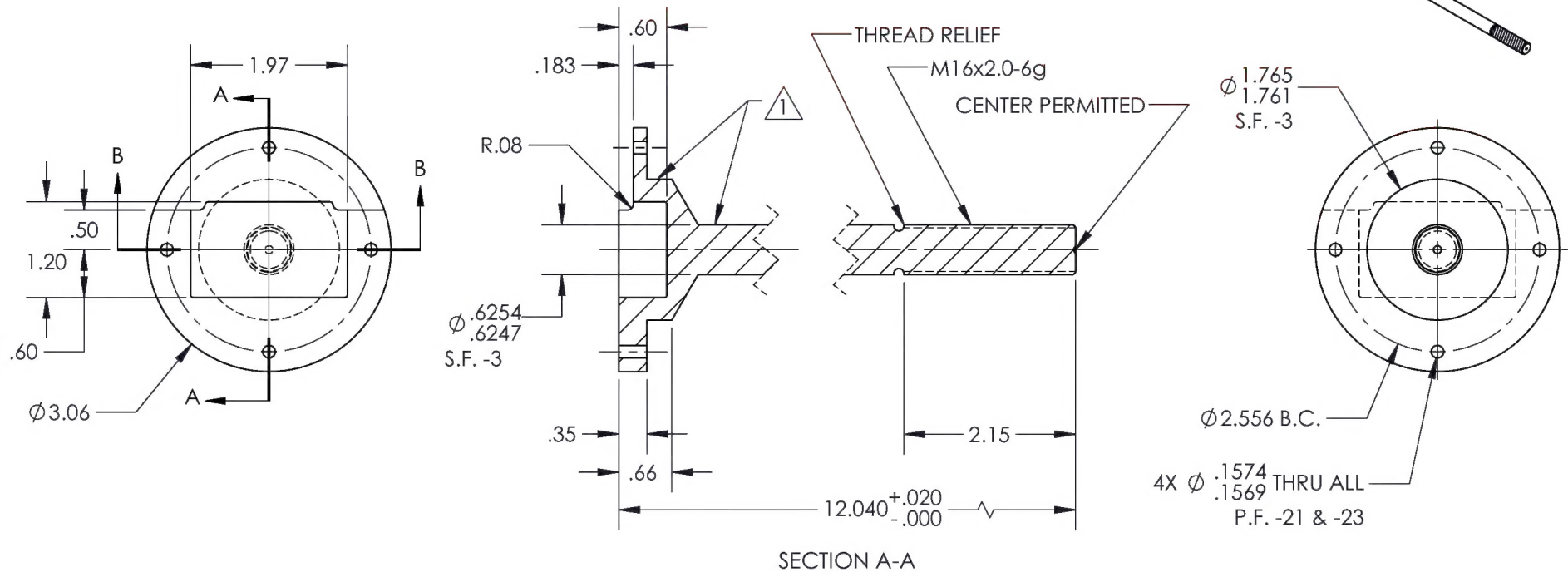
(13)
BASE ROD ASSEMBLY

DART AEROSPACE	
TITLE EXTRACTOR	
DWG NO. RBE105-14101W1-13	REV 1
MAT'L REPT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125°
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	EC145
SCALE 1:2	DATE 12/30/2015
SHEET 8 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS			DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION			

SEE ATTACHED DEVIATION



NOTE:

1 CUT TO +.05 GREATER THAN GIVEN DIMENSION BEFORE HEAT TREAT. GRIND AND FINISH TO GIVEN DIMENSION AFTER HEAT TREAT

DART
AEROSPACE

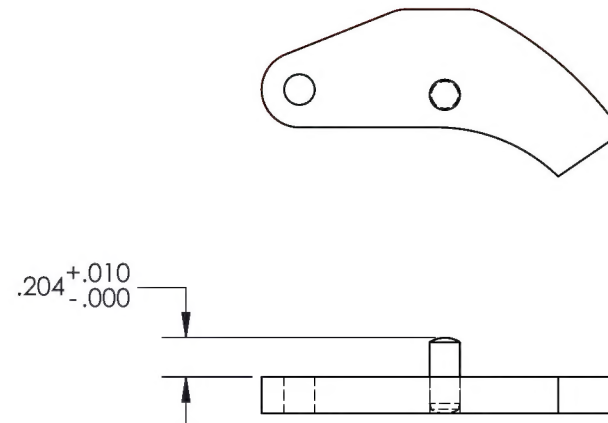
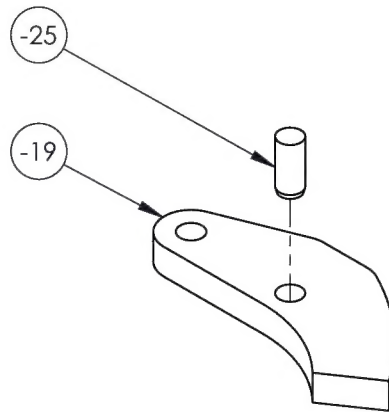
TITLE			EXTRACTOR		
DWG NO.			RBE105-14101W1-15		
REV			1		
MAT'L 4140/4142			UNLESS OTHERWISE SPECIFIED		
HEAT TREAT RC 40-46			DIMENSIONS ARE IN INCHES		
FINISH ZINC PLATE			.XXX ± .005 FRACTIONS ± 1/8		
SPEC ASTM B633 TYPE I SC 2			.XX ± .01 ANGLES ± 5°		
DRAWN BY: DUERFELDT			.X ± .1 SURFACES = 125°		
CHECKED: MACKOVJAK			1. BREAK ALL SHARP EDGES		
OPPS APPR: ANDERSON			.015 x 45° OR .015R		
QA APPR: LINDSAY			2. DIMENSIONAL LIMITS APPLY AFTER PLATING		
APPROVED: GILBERT			3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009		
SCALE 1:2			USED ON MODEL		
DATE 12/30/2015			EC145		
SHEET 9 OF 11					

(15)
BASE ROD

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS						
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED	

SEE ATTACHED DEVIATION



(-17)

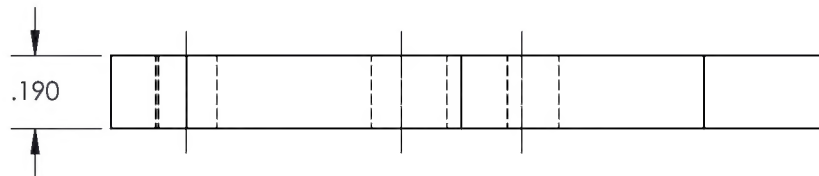
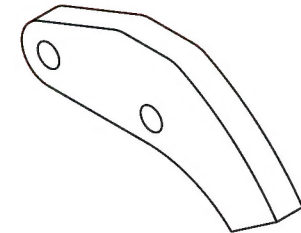
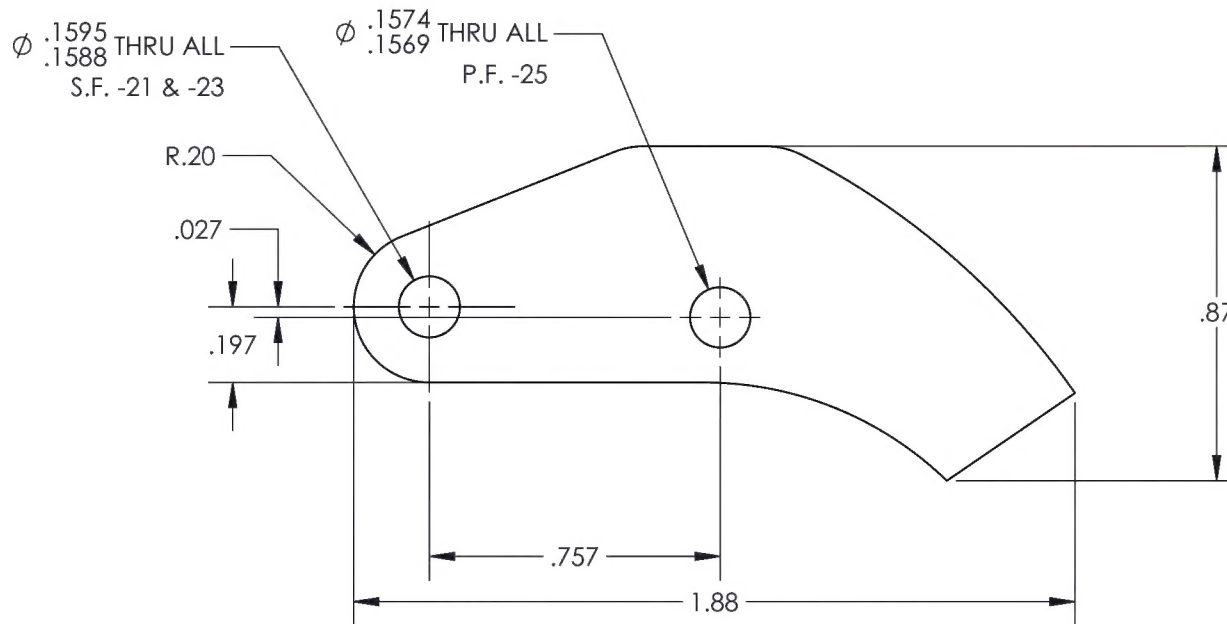
SWING OUT ARM ASSEMBLY

DART AEROSPACE	
TITLE EXTRACTOR	
DWG NO. RBE105-14101W1-17	REV 1
MAT'L FEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125°
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	EC145
SCALE 1:1	DATE 12/30/2015
SHEET 10 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS			
REV	ECR	DESCRIPTION	DATE
			INITIAL
			APPROVED

SEE ATTACHED DEVIATION



(-19)

SWING OUT ARM

NOTE:
USE CAD DATA TO MANUFACTURE.

DART AEROSPACE	
TITLE PULLER	
DWG NO. RBE105-14101W1-19	REV 1
MAT'L 4140/4142 TREAT RC 40-46 FINISH ZINC PLATE	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125✓
SPEC ASTM B633 TYPE I SC 2	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: MACKOVJAK	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: ANDERSON	USED ON MODEL
QA APPR: LINDSAY	EC145
APPROVED: GILBERT	
SCALE 2:1	DATE 12/30/2015
SHEET 11 OF 11	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. <u>RBE105-14101W1</u> <u>REV 1</u>		DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/>		DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Cross tube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> </div> <div> Eng. (Non-AW) <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Water Jet <input type="checkbox"/> Supplier <input type="checkbox"/> Quality <input type="checkbox"/> </div> </div>			
Date : <u>2019-05-23</u>		Sequence #:		QTY Affected :		MRB (QSI042) 	
Description Work Order Deviation				Disposition			
ITEMS -3 AND -15 CALLED FOR ZINC PLATE TYPE 2 CAN CAUSE FIT ISSUES.				- ITEMS -3 AND -15 MUST BE BLACK OXIDE - THIS DEVIATION IS ACCEPTABLE TO USE AS IS - FIT, FORMS AND FUNCTIONS WILL BE AS ORIGINALLY INTENDED			
				Completed By			
				Lead hand / Supervisor			
				QC / QA Coordinator			
Root Cause <div style="display: flex; flex-direction: column; align-items: flex-start;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Presservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input checked="" type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div>		FAULT CATEGORY <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Bending <input type="checkbox"/> Crushing <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Mislabeled </div> <div style="width: 33%;"> <input type="checkbox"/> Contamination <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Incomplete/Unclear Instructions <input type="checkbox"/> Drill Holes <input type="checkbox"/> Fit/Function </div> <div style="width: 33%;"> <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain Direction <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Off-set/Set-up </div> <div style="width: 33%;"> <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Outside Tolerance <input type="checkbox"/> Drawing <input checked="" type="checkbox"/> Finish <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Misread </div> </div>					
Other/Details:							